

REMARKS

Applicant respectfully requests reconsideration of this application as amended. Claims 9-14, 18-21, and 56-58 remain in the application. Claim 18 has been amended. No claims have been added or canceled.

Rejections under 35 U.S.C. § 102(e)

Applicant's claims 9-14, 18-21, and 56-58 have been rejected under 102(e) as being anticipated by Hama, US Patent Publication No. 2004/0202171. Applicant does not admit that Hama is prior art and reserves the right to swear behind the reference at a later date. Nonetheless, Applicant respectfully submits that Hama does not disclose each and every element of the invention as claimed in claims 9-14, 18-21, and 56-58.

Hama discloses establishing a virtual private network (VPN) where the core network for the VPN is a multi-protocol label switched (MPLS) network and networks for accessing the core network are virtual local area networks (VLANs) (Hama, Abstract). A transmit-side edge router converts VLAN VPN traffic to MPLS VPN traffic by determining an MPLS label corresponding to the VLAN tag, stripping the VLAN tag of the data packets, pushing the MPLS label onto the data packets and forwarding the MPLS traffic onto the MPLS network (Hama, paragraph 0071). Conversely, an edge-side router converts the MPLS VPN traffic back to VLAN VPN traffic by determining the VLAN tag associated with the MPLS label, popping the MPLS label off the data packets, adding the corresponding VLAN tag to the data packets and forwarding the data packets onto the VLAN network (Hama, paragraph 0071). The router performs the packet conversion using a forwarding label table for each VPN (Hama, paragraph 0088, Fig. 11A-C). The forwarding label tables comprise routing, MPLS label, VLAN tag, physical

interface information, and MAC address information (Hama, Fig 11A-C). However, Hama's forwarding label table does not contain virtual interface information.

Applicant respectfully submits that Hama does not teach or suggest Applicant's claims. In particular, Hama discloses a VPN forwarding table that include both forwarding information (routing, MPLS label, VLAN tag) and physical interface information (interface, MAC address). In contrast, Hama does not teach or suggest maintaining an interface structure separate from the forwarding data structure, or maintaining a label switched path data structure indicating a virtual port and/or virtual slot. For example, claim 9 requires "... maintaining for network layer switched routes interface structures each storing a set of network layer information ... maintaining for each label switched path (LSP) a forwarding data structure that is separate from the interface structures and that does not include the set of network layer information".

As another example, claim 18 requires, as amended, "... a control card having stored therein, a plurality of interface structures having stored therein network layer information ... a plurality of forwarding data structures separate from the interface data structure, the plurality of forwarding data structures each having stored therein information to determine forwarding of packets from an ingress one of said plurality of line cards to an egress one of said plurality of line cards ..."

Furthermore, claim 56 requires " ... maintaining in a control plane a first data structure that represents a label switched path (LSP), the first data structure indicating a virtual port, a virtual slot, and an identifier to distinguish LSPs of the virtual port and the virtual slot; maintaining in the control plane a second data structure indicating the first data structure, a slot, encapsulation information, and an index for the slot and the encapsulation information; distributing the first data structure, the index, and the egress to

certain of a set of one or more label forwarding information bases (LFIBS) in a data plane; distributing the index and the encapsulation information to certain of a set of data structures within the data plane.”

The above quoted limitations are not described or suggested by Hama. While there are various uses for the invention as claimed, several such uses are discussed at paragraphs 0046-0049. Thus, while the invention is not limited to the uses discussed in these paragraphs, it should be understood that Hama does not enable these uses and the above quoted limitations do.

For at least these reasons, Applicant respectfully submits that the independent claims are allowable. The Applicant respectfully submits that the dependant claims are allowable for at least the reason that they are dependent on an allowable independent claim.

Conclusion

Applicant respectfully submits that the rejections have been overcome by the amendments and remarks, and that the Claims as amended are now in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the Claims as amended be allowed.

Invitation for a telephone interview

The Examiner is invited to call the undersigned at 408-720-8300 if there remains any issue with allowance of this case.


Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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